

## ABSTRACT

The present invention relates to a power amplifier device having a power amplifier, and an object of the invention is to enable efficient use of the power amplifier without causing any problems in the operation of the power amplifier.

5           In order to achieve the object, a controller block 11 judges on the basis of an estimative output power value whether a power amplifier is in a first period in which it performs low power output operation or in a second period in which it performs high power output operation, where, in the first period, the controller block 11 activates a DC/DC converter 2 to supply a power-supply voltage  $V_{dd2}$  as the operating  
10 power-supply voltage to the HPA 1, and in the second period, the controller block 11 controls the DC/DC converter 2 between active and inactive states and a switch 3 between on and off states on the basis of a detected power-supply voltage value  $V_M$  obtained from an operating power-supply voltage detecting circuit 13, so as to supply one of the power-supply voltage  $V_{dd2}$  and a power-supply voltage  $V_{dd3}$  as the operating  
15 power-supply voltage.